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Α



Page 1

* December 1, 2009 12:42:53 PM

Required Date: 15/12/2009

Item	ID:

D117-762-011

Accept



Setup Start



Revision ID:

Start Date:

Item Name:

02/12/2009

Skidtube

Start Otv: 1.00

Cust Item ID:

Customer:



Reference:

Approvals:

Process Plan:

Reg'd Oty: 1.00

Date: 9-12-1

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID Operation Description

Pick Kit

Set Up/ **Run Hours** Draw Number

Draw Plan Code Rev.

Accept Qty

Reject Qty

Reject Insp. Stamp Number

Draw Nbr N/A

Revision Nbr

100

Rev A

0.00

DOCUMENT CONTROL

0.00

AT BG 09/12/16

Document Control

Memo

Photocopy bluefile & type labels per PPP D117-762-011



Packaging Packaging Memo

0.00

0.00

120

Quality Control

QC4- 100% Inspect kits for completeness

0.00

Memo

0.00 > Sioloclis

W/O:			WORK ORDER	CHANGES				
DATE	STEP	PF	OCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / = Prod Mgr	Approval QC Inspector
							•	
Dart No		DAD #-	Foult Cotomony	NOD: Va	No DO	<u> </u>	Data - :	
Part NO	Resolution:		Fault Category: Disposition:	NCR: Ye	s No DQ	A:	_ Date: <u>-</u> Date:	<u> </u>

NCR:		WORK ORDER NON-CONFORMANCE (NCR)												
		Description of NC		Corrective Action Section B		Verification	Annroyal	Approval QC Inspector						
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng							
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Work Order ID 54150

Α



Page 2

• December 1, 2009 12:42:53 PM

Required Date: 15/12/2009

Item ID:

D117-762-011

Accept



Setup Start



Stop

Revision ID:

Item Name:

Start Date:

02/12/2009

QC:

Skidtube

Start Qty: 1.00

Req'd Qty: 1.00

_____ Date:

Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

Process Plan: Date:

Tooling:

SPC (Y/N):

Date:

Date:

Start Run

Stop

Reject

Sequence ID/ **Work Center ID**

130

Packaging

Packaging

Operation Description

Packaging

Set Up/ **Run Hours**

0.00

0.00 Identify and pack for shipping as per PPP D117-762-011

Location: PPP Rev:

140

QC

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

Draw Plan Rev. Code

Accept Qty

Reject Qty

Number Stamp

Insp.

MF 10-01-05

Quality Control

Dart Aerospace Ltd

W/O:	,		WORK ORDER CHANGES											
DATE	STEP	PRO	OCEDURE CH	ANGE		:		Ву	Date	Qty	Approval Chief Eng / - Prod Mgr	Approval QO Inspector		
Part No: _						ť			. •	. 4	. /			
		PROCEDURE CHANGE By Date Qty Approval Chief Eng / Prod Mgr PAR #: Fault Category: NCR: Yes No DQA: Date: PAR #: Disposition: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR) Description of NC Corrective Action Section B												
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				•.	,									
Part No	:	PAR #:	Fault Cat	egory:	·		NCI	R: Yes	No DQA	\:	Date:			
				Disposition: Q										
NCR:	NCR:		WORK ORI	DER NO	N-CONF	ORMA	NCE	(NCF	₹)	,		A. T.		
DATE	STED	Description of NC					n B		Verific	ation	Approval	Approval		
	SILI	Section A		Ac	tion Descri Chief Eng	ption			Section Section			QC Inspector		
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		,		<i>`</i> *					·					
Part No:PAR #: Fault Category: Resolution:Disposition: NCR: WORK ORDER NON-CON DATE STEP Description of NC Section A Corrective Action Description of NC Corrective Action Description of NC Chief Eng Chief			!		:	ŧ.·								
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Picklist Print

December 1, 2009 12:42:59 PM

Work Order ID: 54150

Parent Item:

D117-762-011RevA

Purchased

. No

Parent Item Name: Skidtube

Comments:



Start Date: 02/12/2009

Required Date: 15/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3C4A		Purchased	No		120	Each		8.0000	_		y

BOLT

Warehouse	Lo	c Oty	Loc Code	
Location				
Main Warehouse				
ST		1327		ı
112314		13		ì
112720		12		ľ
112724		3		1
112829		44		İ
112991		39		
113121		216		1
113226		1000		
	120	Each	46.0000	2.0000_

Bolt

Warehouse Location	Loc Oty	Loc Code
Main Warehouse		
. ST	46	
110183	3	
111661	13	

30

112314

Dart Aero	space	Ltd
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W/O:				ORK ORDER CHA	ANGES					
DATE	STEP	PRO	OCEDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			•							
			1	. બો						
					7					
					:					
Part No	•	PAR #:	Fault Ca	tegory:	NC	R: Yes	No DQ	A :	Date:	
	Re	esolution:	Disposit	ion:	QA	: N/C CI	osed:		Date:	,
NCR:			WORK OR	DER NON-CONFO	RMANCE	(NCR	(1)			
DATE	STEP	Description of NC				Section B Verifica			Approval	Approval
DAIL	SIEP	Section A	Initial Chief Eng	Action Descript Chief Eng	tion	Sign & Date	Sign & Section C			QC Inspector
			-							

		,				<u> </u>				
[1 1					}	1.		1	

December 1, 2009 12:42:59 PM

Work Order ID: 54150

Parent Item:

D117-762-011RevA

Parent Item Name: Skidtube

Start Date: 02/12/2009

Required Date: 15/12/2009

Comments:	Kidiube					•			Start Qty: 1.00		equired Date: 1. Required Qty: 1.	
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960C10L		Purchased	No	<i>*</i> .		120	Each	1,844.000	8.0000	m 11328	8 C	
Washer or NO51149Co:	332l MGg/	12/18		Warehou Loca OFFSHO	tion	Loc	<u>Oty</u>	Loc Code				
				FG			100		_			
				Main Wa	103585 rehouse		100					
				ST			1744		-			
					112116 112612 112933		536 342 866		_			
D3864-1RevA	H 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Manufactured	No		112733	120	Each	40.0000	4.0000		104/19	//c C

Loc Qty Loc Code Warehouse Location Main Warehouse ST 40 47351

47351

Dart Ae	rospace	e Ltd								• •
W/O: WORK ORDER CHANGES										
DATE	STEP	•	PRO	OCEDURE CHANGE	E	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
										<i>,</i>
·,		,					<u> </u>			
		,	•							
			•							
										
Part No):		PAR #:	Fault Category:	NCR:	Yes N	o DQ A	٨:	_ Date:	·
	R	Resolution:		Disposition:	QA: N	/C Clos	sed:		Date:	
NCR:			\	WORK ORDER NON-CON	IFORMANCE (NCR)				

	WORK ORDER NON-CONFORMANCE (NCR)									
				Description of NC		Corrective Action Section B		Verification	Approval	
STEP	Section A	initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector			
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	STEP	Section A	Section A Initial Chief Eng	STEP Section A Initial Action Description Chief Eng Chief Eng	STEP Section A Initial Action Description Chief Eng Chie	STEP Section A Initial Chief Eng Chief Eng Sign & Date Section C	STEP Section A Finitial Chief Eng Chief Eng Sign & Date Section C			

Picklist Print

December 1, 2009 12:42:59 PM

Page 3

Work Order ID: 54150

Parent Item:

Comments:

D117-762-011RevA

Parent Item Name: Skidtube

D117-762-041RevA

Replacement Skidtube D3512-1RevC



Start Date: 02/12/2009

Required Date: 15/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L6		Purchased	No			120	Each	524.0000	2.0000 <u> </u>)	1/2	2 · /

Nut

	<u>Warehouse</u>	<u>Loc</u>	: Qty	Loc Code	i	
	Location					
	Main Warehouse					
	ST		524			
	105077		22			
	110002		5			
	111548		8			
	111578		400			
	112492		89		.	M112492
No		110	Each	0.0000	1.0000	
						54161 (2/0/6
No		120	Each	7.0000	2.0000	
						(-19/12/16
						_ '^ '

Wearplate

Manufactured

Manufactured

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST500	7	
51390	7	

B 54452

51390 /X

Dart Aerospace Ltd

	•										
W/O:		WORK ORDER CHANGES									
DATE STEP		PROC	>	Ву	Date	Qty	Approval Chief Eng / • Prod Mgr	Approval QC Inspector			
									:	·	
			J . 1 111		De .						
		•	.*					:			
Part No: PAR #:		PAR #:	_ Fault Ca	tegory:	N	CR: Yes	No DQA		_ Date: _		
Resolution:			Disposition:			QA: N/C Closed: Date:					
NCR:		W	ORK OR	DER NON-COM	IFORMANO	E (NCR)				
DATE	STEP	Description of NC	Corrective Action						Approval	Approval	
DAIL	SILF	Section A	Initial Action De Chief Eng Chief				Section C (Chief Eng	QC Inspector	
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					:						
			:			·		``			
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5.0 PARTS LIST



5.1 D117-762-011 Skidtube Parts List

Item	Qty -011	Qty -041	Part Number	Description
	Х		D117-762-011	SKIDTUBE INSTALLATION
1	1	. X	D117-762-041	REPLACEMENT SKIDTUBE
1		1	D3582-041	SKIDTUBE ASSEMBLY
2	2		**1121-51002	SKID SHOE
3	2		**1121-51102	CLAMPING RING
4	8		**LN9380M8X45	HEXAGON BOLT
5	8		**LN9023A8-1.4544.9	LOCKING WASHER
6	8		**LN9025-0815K	WASHER (OR LN9025-0815L)
10		1	*D2965 ·	CAP
11		2	***AELS-1032-225	INSERT
12		2	*AN3C5A	BOLT
13		2	*AN960C10L	WASHER
20A		1	*D3508-9	WEARPLATE
20B		1	*D3558-9	GASKET
21A		1	*D3508-3	WEARPLATE
21B		1	*D3558-3	GASKET
22A		1	*D3508-11	WEARPLATE
22B		1	*D3558-11	GASKET
23A		1	*D3508-13	WEARPLATE
23B		1	*D3558-13	GASKET
24		36	*AELS-1032-130	INSERT
25	* 81	28 /	*AN3C4A	BOLT
26/	8	,284	*AN960C10L/	WASHER
27	2	7	'D3512-1 /	WEARPLATE
30		2	*AELS-1032-130	INSERT
31		2	*AN4-4A	BOLT
32		2	*AN960JD416L	WASHER
40		2	*D3492-049	PLUG ASSEMBLY
41		2	***NAS1611-016	O-RING
42		2	*D3492-051	PLUG ASSEMBLY
43	1	2	***NAS1611-015	O-RING
44		6	*D3492-053	PLUG ASSEMBLY
45	i .	6	***NAS1611-012	O-RING
	<u> </u>			
50	2		AN4-51A	BOLT
51	4		D2972	BUSHING
52	2	_	MS21042L4	NUT (OR MS21042-4)

* PART IS INCLUDED WITH D3582-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

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Revision: \boldsymbol{A}

Date: 07.04.27

REFERENCE ONLY

5

5.1 D117-762-011 SKIDTUBE PARTS LIST (IIN-D117-762) 32.8 D117-762-011 SKIDTUBE PARTS LIST (ICA-D117-762)

ITEM	Qty -011	Qty -041	PART NUMBER	DESCRIPTION
	х		D117-762-011	SKIDTUBE INSTALLATION
	1	Х	D117-762-041	REPLACEMENT SKIDTUBE

<u>IS:</u>

50 /	2	11	AN6-52A /	BOLT
51/	4		D3864-1 7	BUSHING
52	/ 2		MS21042L6	NUT (OR MS21042-6)

WAS:

50	2	AN4-51A	BOLT
51	4	D2972	BUSHING
52	2	MS21042L4	NUT (OR MS21042-4)

TO UPGRADE A D117-762-011 SKIDTUBE FROM CHG 001 TO CHG 002, THE FOLLOWING KIT CAN BE OBTAINED FROM DART:

Qty -041	PART NUMBER	DESCRIPTION			
х	DSI 9435-011	GROUND HANDLING HARDWARE CHANGE			
2	AN6-52A	BOLT			
4	D3864-1	BUSHING			
2	MS21042L6	NUT (OR MS21042-6)			

DESIGN	PH	DART AEROSPACE USA, INC					
DRAWN	PH		PORT HADLOCK, WA				
CHECKED	1 1	DRAWING NO.	REV. A				
MFG. APPR.	N/A	DSI 9435	SHEET 2 OF 2				
APPROVED	/ What	TITLE	SCALE				
DE APPR.		GROUND HANDLING	HARDWARE CHG NTS				
DATE 08.	12.04	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND NOT TO BE USED FOR ANY PURPOSE OR COPIED O	ART AEROSPACE USA, INC D IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS IR COMMUNICATED TO ANY OTHER PERSON WITHOUT MADARY AEROSPACE USA INC.				

Work Ord February 04, 2												Page
Item ID: Revision ID:	D117-762-01	11		Accept					Setup	Start		
Item Name:	Skidtube									Stop		
Start Date: Required Date Reference:	02/04/2010 e: 02/11/2010 NCR10-0111	Start Qty: 2.0 Req'd Qty: 2.0 Re-work	140000 1101 1201		Cust Item l Customer:	ID:					4 388JIINI 1	
Approvals:	Process Plan	n:	Date: _// -@4	Tooling:	D	ate:			Run	Start		
	QC:	X	Date: 10 02.04	_		ate:				Stop		
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Rejo Qty		Reject Number	Insp. Stamp
Draw Nbr	Revi	ision Nbr										
N/A	Rev	A										
100				0.00				(2	$\sqrt{2}$			
QC		Memo		0.00								
Quality Control		1x B541 1x B541		= >	mh	10	102	116	,			
110		Assemble as per dwg	;	0.00								

0.00

-Remove the D3508-9 wearplate & re-work per attached NCR w/o sheet. **Ensure the slot is made square: 0.300" x 0.360"(maximum) towards the centerline on the most forward holes only.

Memo

-Debur the wearplate & touch up grey.

HandFinish

Hand Finishing

Work Orde February 04, 20											Page 2
Revision ID: Item Name: Start Date:	D117-762-01 Skidtube 02/04/2010	Start Qty: 2.00		Accept	Cust Item I			s	Setup Sta		
Required Date: Reference:	NCR10-011	Req'd Qty: 2.00 Re-work			Customer:						
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		te: te:		F	tun Sta Sto		
Sequence ID/ Work Center ID 120 QC Quality Control		Operation Description QC5- Inspect part compl	eteness to step on W/O	Set Up/ Run Hours 0.00	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 HandFinish Hand Finishing		Assemble as per dwg Memo Assemble th	e wearplate back onto the t	0.00 ube.	m-h	10	102	 1 ₁₆	(2X		

140 QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

Work Order ID 55903

February 04, 2010 10:06:23 AM



Page 3

Item ID:

D117-762-011

Accept



Setup Start

Stop



Revision ID:

Item Name: Skidtube

Start Date: 02/04/2010

Start Oty: 2.00

Required Date: 02/11/2010 Reg'd Oty: 2.00

Cust Item ID: Customer:

Reference:

NCR10-011 Re-work

Approvals:

Process Plan:

Date:

Tooling:

Date:

Draw

Rev.

Start

Stop



Date:

SPC (Y/N):

Set Up/

Run Hours

Date:

Draw

Number

Accept

Qty

Plan

Code

Reject Qty >

Run

Insp.

Sequence ID/ Work Center ID

150

Packaging

Packaging

Operation Description

Identify as per dwg & Stock Location:

0.00

Nev A

Memo

0.00

Ensure the correct tube goes back into the correctly identified box.

Also ensure the corresponding kit & paperwork is included.

Re-stock using the original batch #

160

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Add a copy of this w/o to the original w/o's as a referance.

Reject Number

Stamp

mf 2 22

Dart Aerospace	Ltd
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W/O:			WORK ORDER CHA	ANGES					
DATE	STEP	PRO	CEDURE CHANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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		•	1						
							ì	1	
		Se	e NCR 10-011		I			<u></u>	
Part No	D117- 762-	OL() PAR #:	Fault Category: Proc. Skidle	<u>bes.</u> NCR	: Yes	No DQ	A:	_ Date: _/	6.02.04
	Resolution	on: re-work	Disposition:	QA:	N/C C	closed:		Date: _	

NCR: 10	~0 <i>\\</i>	Wo	ORK OR	DER NON-CONFORMANCE	(NCR)			
		Description of NC		Corrective Action Section B	Verification	Ammanal		
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector
10.02.04	250	upon assembly of the D3508-9 wear plate, it was noticed that the holes in the tube were too narrow and cousing the busings to lift in the center when tightened.	Je Josius.	Drill jig find hole angle slightly changed (camein) with use, due to mild o.D coushing on the tube from bending DTB974 is Remarked.	522 9. DCR107	10.02.04	LISIUL	10.02.04
		R.C. Tooling.	10.02.01 OSI 012	-On the 2 most fuct holes on the D3508-9 wearphate, Slot the holes, square, to max 0.060 (or as necessary), to allow the bolts to tighten	10-2-10	5 10/01/11	10.52,57	10.02.04
			10.02.01	wear plater 0.300 x 0.360 mars		S colonlists	10.02.04 DE 042	1,0.02.04